

Application No.: 10/004,732
Amendment Dated: July 26, 2004
Reply to Office Action of: May 4, 2004

REMARKS

Claims 1-20 and 33-36 remain pending in this application.

Reconsideration of the merits of this application, in light of the remarks that follow, is respectfully requested.

Rejection under 35 U.S.C. §102

Claims 1, 3-8, 11, 13-18, 20, 33, and 35 have been rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Kroll et al., US Patent No. 5,257,634. Applicants traverse the rejection.

Applicants continue to assert that Kroll et al. do not disclose, *inter alia*, a tine element array extending through a segment of a lead proximal to an electrode array or a coil electrode as required by claims 1, 3-8, 11, 13-18, 20, 33, and 35. The Office Action stated that Applicants arguments were unpersuasive because "... the Kroll reference shows the electrode tip (25) and the extension members (24) as separate elements. The extension members are extending proximally from the electrode; also figures 5, 6, and 9 further illustrate this." However, Kroll clearly teaches that the "tines" are part of the electrode.

For example in the SUMMARY OF THE INVENTION at Column 1, lines 49- 52, Kroll teaches, "The catheter electrode has a conductive body portion of a specified length and diameter and has at least one conductive extension member resiliently extending outward therefrom." The extension member ("tine") extends from the electrode body portion. Thus, unlike claims 1, 3-8, 11, 13-18, 20, 33, and 35 where the tines extend from the lead proximal to an electrode array, the extension members (tines) of Kroll extend from the electrode.

Further, the figures of Kroll referred to in the Office Action clearly show that the extension members ("tines") of Kroll extend from the electrode, rather than from a lead proximal to an electrode. For example, Figure 3 of Kroll shows extension members (24) extending from the electrode (20). *See, e.g.*, Column 2, lines 45-49. Figure 5 of Kroll shows extensions (28, when braids are cut) that are part of the electrode (26) and that extend from the electrode conductive body (27). *See, e.g.*, Column 3, lines 36-43. Figure 6 of Kroll shows that the extension members (33) are part of the electrode (30) and extend from the electrode conductive body (31). *See, e.g.*, Column 3, lines 36-43. Figure 9 of Kroll shows extension members (43) as

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being a part of the electrode (40) and as being positioned in indented portions (42) of electrode conductive body portion (41). *See, e.g.*, Column 4, lines 4-9.

In Kroll et al., the "tines" are in conductive communication with a conductive body portion of the electrode and are designed to "provide an increased effective length of the electrode conductive body portion to provide a catheter electrode structure having a relatively low electrical impedance." Column 1, lines 53-56. In contrast, claims 1, 3-8, 11, 13-18, 20, 33, and 35 of the present application require that a tine element array be in a position on the lead proximal to an electrode array or coil electrode. The Kroll patent does not disclose each element of claims 1, 3-8, 11, 13-18, 20, 33, and 35 of the present application. As such, Applicants respectfully request that the rejection be withdrawn.

Rejections under 35 U.S.C. §103

Claims 2 and 12 have been rejected under 35 U.S.C. §103(a) as allegedly being obvious over Kroll et al., US Patent No. 5,257,634. Claims 9 and 19 have been rejected under 35 U.S.C. §103(a) as allegedly being obvious over Kroll et al., US Patent No. 5,257,634 in view of Bush et al., US Patent No. 5,282,845. Claims 34 and 36 have been rejected under 35 U.S.C. §103(a) as allegedly being obvious over Kroll et al., US Patent No. 5,257,634 in view of Borkan et al., US Patent No. 6,510,347. Applicant traverses each of the rejections.

Upon reading of each or all of the cited references, one of skill in the art would not arrive at the present invention. As stated above, the primary reference, Kroll et al., does not disclose or suggest a tine element array extending through a segment of a lead proximal to an electrode array or a coil electrode. Bush et al. and Borkan et al. do not overcome this deficiency. As the cited references, alone or in combination, do not teach or suggest such a feature as required by claims 2, 9, 12, 19, 34 and 36, withdrawal of the rejection is respectfully requested.

For purposes of example, the rejection of claims 2 and 12 as being obvious over Kroll will be discussed in more detail. The Office Action stated that it would have been obvious to "modify the systems and teachings of Kroll to have tines that are formed of flexible biocompatible plastic selected from the group consisting of medical grade polyurethane compounds and silicone rubber compounds." However, such a modification as suggested in the Office Action would render the electrode of Kroll ineffective. The "tines" in Kroll are in are a

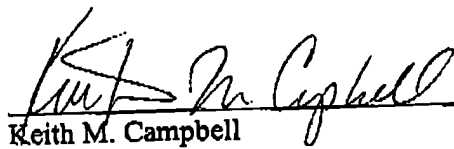
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part of the electrode and extend from a conductive body portion of the electrode and are designed to "provide an increased effective length of the electrode conductive body portion to provide a catheter electrode structure having a relatively low electrical impedance." Column 1, lines 53-56. Because plastic is relatively non-conductive, one would destroy the ability to the electrode of Kroll to perform as intended if one were to substitute the "tines" of Kroll with plastic. Moreover, if one were to replace with plastic the tines of Kroll, as taught in embodiments of the Kroll patent, one would be replacing the conductive body of the electrode with plastic, as the tines are simply an extension of the conductive body. In essence, the Office Action is suggesting that it would be an obvious design choice to replace the electrode of Kroll with relatively non-conductive plastic. Such a position is simply not tenable. As, such the withdrawal of the rejection is respectfully requested.

In view of the foregoing amendments, it is believed that the application is now in condition for allowance and notice of same is respectfully requested.

Respectfully submitted,

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